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The Gamma-Ray Sky as Seen with HAWC

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The High-Altitude Water Cherenkov (HAWC) TeV Gamma-Ray Observatory located at a site about two hours' drive east of Puebla, Mexico on the Sierra Negra plateau (4100 m a.s.l.) will be inaugurated in March 2015. The array of 250 water Cherenkov detectors can observe large portions of the sky simultaneously and, with an energy range of 100 GeV to 100 TeV, is currently one of the most sensitive instruments capable of probing particle acceleration near PeV energies. HAWC has already started science operation in Summer 2013 and preliminary sky maps have been produced from 260 days of data taken with a partial array. Multiple $> 5 \sigma$ (pre-trials) hotspots are visible along the galactic plane and some appear to coincide with known TeV sources from the H.E.S.S. catalogue, SNRs and molecular cloud associations, and pulsars wind nebulae (PWNe). The data have also been searched for high-energy emission from GRBs detected at lower energies. I will discuss the latest maps of HAWC and the scientific potential of the instrument especially in the context of multi-wavelengths studies.

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